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Filed 16 September 2003

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Amendments to the Specification

Please amend the first paragraph in the BACKGROUND section on page 1 as follows:

In high volume printing of multi-page publications such as books, magazines and brochures it is common to print multiple pages on a large sheet known as a signature. The signature is printed both sides in a printing press, then folded, and cut to form a section of the publication. Most publications are made up of many sections, especially those with a large number of pages.

Please amend the second paragraph in the BACKGROUND section on page 1 as follows:

The Making a plan for positioning the individual pages on a sheet is known as imposition. Imposition must take many factors into account to ensure that when the publication is bound the pages will be in alignment and correctly sequenced. To reduce the possibility of an imposition error in the final printed press sheet it is common to make an imposition proof prior to running the signature on press. The imposition proof should be an accurate facsimile of the press sheet signature and in particular the correct alignment of the individual pages is critical to produce a useful proof sheet.

Please amend the third paragraph in the BACKGROUND section that spans pages 1 and 2 as follows:

Due to the high cost of press time it is not practical to run the imposition proof on the printing press. This has lead to the proliferation of stand alone proofers that are specifically designed to make a proof sheet sheets. In and in recent years there has been considerable interest in using inkjet printers for this purpose. Wide format inkjet printers represent a cost effective alternative to other more costly

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proofing methods that have been employed in the past. Additionally, inkjet printers equipped with higher imaging quality may also produce images of sufficient quality to serve as a color proof proofs. One such proofing solution is the Creo Integris™ system that combines a proof controller, an EPSON Stylus® Pro 7600 or 9600 or other suitable wide-format inkjet printer and specially qualified inks and media for producing imposition and color proofs.

Please amend the first full paragraph of the BACKGROUND section spanning lines 12 through 23 on page 2 as follows:

One problem that presents in adapting commercially available printers to print imposition proofs is the maintaining accurate alignment of images to the media sheet. There is a particular problem in double sided printing where it is necessary to align images on the front and back of the printed sheet to within ± 1 mm or better. Automated solutions such as Spinjet™ made by TechSage of Denmark automatically flip the sheet for reverse side printing while simultaneously taking care of alignment. Unfortunately such add-on hardware is often even more expensive than the printer itself. On the other hand manual flipping of the sheet is very prone to operator error and most moderately priced printers are not equipped to take account of a skewed media sheet.

Please amend the second paragraph in the SUMMARY OF INVENTION section on page 3 as follows:

In a first aspect of the present invention an alignment device for aligning a media sheet with a print axis of a printer is provided. The media sheet has a leading edge and a trailing edge. The device comprises at least one registration feature for aligning the trailing edge of the media sheet. The

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registration feature is located in alignment with the print axis of the printer.

Please amend the third paragraph in the SUMMARY OF INVENTION section on page 3 as follows:

In another aspect of the present invention ~~is~~ a method of aligning a media sheet to be loaded into a printer along a feed path is provided. The sheet has a leading edge and a trailing edge. The method comprises loading the media sheet so that the leading edge of the sheet is in proximity to the feed path and aligning the trailing edge of the media sheet to at least one registration feature.

Please add the following new paragraph on page 4 immediately before the DESCRIPTION section:

Figure 6A shows a registration feature comprising a protruding lip, Figure 6-B shows a registration feature comprising a groove, and Figure 6-C shows apparatus comprising a proximity sensor.

Please amend the first paragraph in the DESCRIPTION section that spans pages 4 and 5 as follows:

Wide format inkjet printers typically comprise some means of feeding a media sheet past a printing area. The printing area is traversed by the inkjet heads line-by-line, forming an image on the media sheet while advancing the media through the printer. The printing area may be a platen and may employ vacuum to draw the media down into close contact with the platen. While roll feed media is convenient for single sided printing, when the sheet is flipped and fed into the printer for double sided printing the curl in the media sheet is often a problem for the media handling components. Double sided

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proofing is thus more commonly performed with sheet fed media stock. The printer typically includes optical sensors for detecting the edges of the media in order to position the image on the page with respect to the print axis. The sensors will typically detect the location of the leading edge and the sides of the sheet and may even detect the skew of the leading edge skew, if it exists. If the leading edge is skewed to the print axis by more than some specified maximum the sheet is rejected. ~~in this application and appended claims the~~ The term "print axis" is used herein to refer to the axis to which the media need be aligned to ensure that the image is printed orthogonal to the media. The print axis may be aligned with the traversing direction of the inkjet printhead but this is not mandated and the print axis may be any other convenient reference.

Please amend the paragraph in the DESCRIPTION section that spans pages 5 and 6 as follows:

An embodiment of the present invention is shown in FIG. 1. A wide format inkjet printer 10 has an upwardly projecting roll-feed media supply compartment 12. Roll feed media is dispensed directly into the printer from compartment 12. Compartment 12 has a cover portion 13 that opens upwards to allow access to change the media roll. Individual sheets of media may be fed to the printer via slot 14. An alignment device 15 is attached to the cover 13 of compartment 12 via a pair of adjustable brackets 18. The alignment device comprises a polycarbonate support surface 16 with registration plates 22, 24 and 26 secured to the upper edge. In the embodiment shown in FIG. 1, there is also a bend in the support surface at 20. The bend placed places the registration plates 22, 24 and 26 out of the plane of the support surface, although this feature is not mandated. Arrow 28 indicates the print axis,

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which in this case is parallel to the printhead traverse (printhead not shown).

Please amend the second paragraph on page 7 that spans onto the first two lines of page 8 as follows:

The skew of the support surface 16 is adjusted by first setting both alignment thumb screws 38 at a mid travel position and then loading a sheet of media (loading is be described later). A test image having a horizontal line near the leading edge of the sheet is then printed. By definition the horizontal line is aligned with the print axis. The sheet is then unloaded and examined to determine the skew between the horizontal line and the leading edge of the sheet.

Depending on the accuracy required the examination may be visual or may employ a measurement tool or jig to more accurately determine the misalignment. Any observed misalignment is converted into a corresponding adjustment of the alignment thumb screws 36 in accordance with a simple conversion factor. The operator then adjusts the screws as indicated and prints another test image, which either verifies alignment or indicates a further adjustment to be made. When the horizontal line is satisfactorily aligned with the edge of the sheet then the alignment device is also aligned to the print axis.

Please amend the second paragraph on page 11 that spans lines 4 to 15 as follows:

While the above embodiments have been described in reference to a specific hardware embodiment a person of skill in the art will readily appreciate that there are many alternatives are possible without departing from the scope of the invention. For example while a registration plate has been described the registration features may also be implemented using a proximity sensor 100 for detecting the edge of the sheet as

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shown in Figure 6-C. The proximity sensor can be and adapted to present feedback to the operator by visual or other means. The proximity sensor may be optical, a contact switch, or any other type known in the art. The registration feature may also be a simple line marked on the support surface, a laser beam projecting across the support surface or a lip or groove formed in the support surface. Figure 6-A shows a registration feature 101 that is a lip. Figure 6-B shows a registration feature 102 that is a groove.